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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,204	03/23/2001	Masayuki Kobayashi	F-6917	5830

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EXAMINER

HAVAN, THU THAO

ART UNIT	PAPER NUMBER
2672	5

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,204

Applicant(s)

KOBAYASHI, MASAYUKI

Examiner

Thu-Thao Havan

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application. Drawings are objected to because of misspell word "oordinates" in figure 4, element S6. Please make the correction.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims **1-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuoki et al. (US patent no. 5,537,224) in view of Yasui et al. (US patent no. 6,320,580).

Re claim **1**, Suzuoki teaches A.) a system for projectively transforming a plurality of polygons, which form three-dimensional object located in an imaginary three-dimensional space, to a viewport coordinate system to draw the polygons on a projection plane (col. 3, lines 9-44; figs. 1 and 7); in other words, Suzuoki teaches a computer game system transforming polygons such as letter A, B, and C in figure 7 in a

coordinate transformation unit of figure 1 in a virtual three-dimensional space; B.) a polygon drawing means for drawing a polygon with a first texture which affects drawing of other texture (col. 4, lines 10-61); in other words, Suzuki teaches mapping the texture to the image of a polygon in that the texture is dynamically rewritten and changes in the texture of the moving image. Thus when one texture being change then other textures is also being altered; C.) a second texture drawing means for drawing a second texture, prepared in advance, on the polygon drawn by the polygon drawing means based on two-dimensional coordinates of the second texture (col. 4, line 62 to col. 5, line 40; figs. 2, 5a-5c, and 7); in other words, figure 7 of Suzuki discloses the background in two-dimensional format that's prepared in advance; and D.) a texture moving means for simulatively moving the second texture, drawn by the second texture drawing means, on the polygon drawn by the polygon drawing means by varying the two-dimensional coordinates in time-series (col. 3, line 50 to col. 5, line 40; figs. 7-8); in other words, Suzuki teaches the cube (i.e. the second texture) is being vary by the movement in a moving image data in a texture area of the image memory.

Suzuki *fails* to explicitly teach as claimed a game system. Yasui, on the other hand, specifically teaches a game system for an image processing apparatus capable of efficiently performing a computation for processing of a plurality of polygons and a simulation program generates polygons which form an object to be displayed (col. 1, lines 5-52). The polygons in the display screen are clipped based on the polygon data, and for the clipped polygons, the 3D coordinates of the vertexes are scan-converted to two-dimensional coordinates on the display screen.

Therefore, taking the combined teaching of Suzuoki and Yasui as a whole, it would have been obvious to combine the teaching of Yasui to the system of Suzuoki because doing so would have enabled changing polygons in three dimensional game machine to implement frame by frame changing images as noted in Yasui (Yasui: col. 1, lines 5-52).

Re claim 2, Suzuoki teaches two-dimensional coordinates of the second texture are calculated by transforming three-dimensional coordinates of vertexes of the polygon (col. 3, line 50 to col. 4, line 10; fig. 2). In figure 2 of Suzuoki discloses calculation of slope of polygon in three-dimensional to two-dimensional coordinate conversion transformation.

Re claim 3, Suzuoki teaches two-dimensional coordinates of the second texture are calculated by projectively transforming three-dimensional coordinates of vertexes of the polygon on an imaginary two-dimensional plane which is prepared in advance and corresponds to the two-dimensional coordinates (col. 4, line 62 to col. 5, line 40; figs. 2, 5a-5c, and 7). In other words, figure 7 of Suzuoki discloses the background in two-dimensional format that's prepared in advance while the three-dimensional coordinates are in the letters A, B, C.

Re claim 4, Yasui teaches luminance of colors of the second texture is different in different areas in the second texture (col. 2, lines 6-29). Yasui teaches blending the colors of a polygon with the color of polygon located in the background. When blending colors then the color textures are different.

Re claim 5, Yasui teaches luminance of colors of the second texture vary in proportion to coordinate value in either one direction of the two-dimensional coordinates if the two-dimensional coordinates are fixed (figs. 48 and 51).

Re claim 6, Suzuoki teaches a part of the second texture undergoes an affect of gradation by the first texture (col. 4, lines 10-61). In other words, Suzuoki teaches mapping the texture to the image of a polygon in that the texture is dynamically rewritten and changes in the texture of the moving image. Thus, when one texture being change then other texture is also being altered.

Re claim 7, Suzuoki teaches gradation is executed by mixing the colors of the first texture and the colors of the second texture with a predetermined mixing ratio (col. 5, lines 3-33; fig. 8). The color look-up table of Suzuoki discloses gradation is executed by mixing the colors.

Re claims 8-11, these limitations are being treated with the same grounds of rejection as claim 1 above.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwasaki, US patent no. 6,518,967

Totsuka, US Patent No. 6,443,842

Nishino et al., US Patent No. 6,540,614

Inquiries

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu-Thao Havan whose telephone number is (703) 308-7062. The examiner can normally be reached on Monday to Thursday from 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (703) 305-4713.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:


(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Thu-Thao Havan
Art Unit: 2672

April 17, 2003



MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600